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| EXAMINER |
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MANOHARAN, MUTHUSWAMY GANAPATHY

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| ART UNIT | PAPER NUMBER |
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2617

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/816,589

Applicant(s)

CHEN ET AL.

Examiner

Muthuswamy G. Manoharan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuisma et al (hereinafter Kuisma) (US 2002/0078228) in view of Cantwell et al. (hereinafter Cantwell) (US 6553237) and further in view of Skog et al. (hereinafter Skog) (US 2006/0236187).

Regarding **claim 1**, Kuisma teaches a method for handling wireless messaging errors resulting from an attempted receipt of a message by a wireless telephone comprising the steps of:

receiving a message notification from a first messaging switch, the message notification being associated with a message at a second messaging switch
(Paragraph [0005], lines 8-9);

initially attempting to retrieve the message from the second messaging switch (Paragraph [0002], lines 20-24);

Kuisma did not teach specifically, if an error message corresponding to an error condition is received from the second messaging switch; classifying the error condition as temporal or permanent; automatically performing a plurality of retry attempts to retrieve the message, each retry attempt being performed after a corresponding waiting period has passed since the previous attempt to retrieve the message; and abandoning the message when the error condition is classified as permanent.

However, Cantwell, teaches in an analogous art, a method wherein if an error message corresponding to an error condition from the second messaging switch; classifying the error condition as temporal or permanent (Col. 4, lines 46-48; "it might be possible to shut down the remote unit after a prescribed number of times", this implies permanent error condition, Col. 3, lines 22-24); automatically performing a plurality of retry attempts to retrieve the message when the error condition is classified as temporal, each retry attempt being performed after a corresponding waiting period has passed since the previous attempt to retrieve the message (Figure 2,3; Col. 2, lines 16-28); and abandoning the message when the error condition is classified as permanent ("it might be possible to shut down the remote unit after a prescribed number of times", Col. 3, lines 22-24).

Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method wherein if an error message corresponding to an error condition is received from the second messaging switch; classifying the error condition

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as temporal or permanent; automatically performing a plurality of retry attempts to retrieve the message, each retry attempt being performed after a corresponding waiting period has passed since the previous attempt to retrieve the message; and abandoning the message when the error condition is classified as permanent.

This modification reduces the load on the base unit and thereby reduces the likelihood of a complete system failure and also handles non-recoverable messages.

Neither Kuisma nor Cantwell teaches error code corresponding to an error condition. However, Skog teaches in an analogous art error code corresponding to an error condition (Abstract). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use error code corresponding to an error condition in order to notify the user of the error.

Regarding **claim 2**, the combinations of Kuisma, Cantwell, Skog teaches all the particulars of the claim 1. Kuisma did not teach specifically a method wherein each waiting period is longer than the preceding waiting period. However, Cantwell teaches in an analogous art, the method wherein each waiting period is longer than the preceding waiting period (Col. 2; lines 24-28; Col. 3, lines 12-19). Therefore, it would be obvious to one of ordinary skill in the art, at the time of invention to use the method wherein each waiting period is longer than the preceding waiting period. This method helps reducing collisions between the particular remote unit and the other remote units.

Regarding **claim 3**, the combinations of Kuisma, Cantwell, Skog teaches all the particulars of the claim 2. Kuisma did not teach specifically a method wherein each retry

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attempt comprises the steps of: determining whether the wireless telephone is currently in use; and attempting to retrieve the message when the wireless telephone is not in use. However, Cantwell teaches in an analogous art, the method wherein each retry attempt comprises the steps of: determining whether the wireless telephone is currently in use; and attempting to retrieve the message when the wireless telephone is not in use (Col. 3, lines 34-37). Therefore, it would be obvious to one of ordinary skill in the art, at the time of invention to use the method wherein each retry attempt comprises the steps of: determining whether the wireless telephone is currently in use; and attempting to retrieve the message when the wireless telephone is not in use. This modification helps one to make sure the availability of the channel for multimedia transmission.

Regarding **claim 4**, the combinations of Kuisma, Cantwell, Skog teaches all the particulars of the claim 3. Kuisma did not teach specifically a method further comprising the steps of: determining whether a second message has been successfully sent to or received from the wireless telephone; upon determination that a second message has been sent or received from the wireless telephone, attempting a retry for the message without waiting the corresponding waiting period. However, Cantwell teaches in an analogous art, the method further comprising the steps of: determining whether a second message has been successfully sent to or received from the wireless telephone; upon determination that a second message has been sent or received from the wireless telephone, attempting a retry for the message without waiting the

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corresponding waiting period (Col. 3, lines 10-22). (The waiting period is implemented just to avoid collision (of messages) between remote units. Therefore, no waiting period is required if the transmission is successful.) Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method of claim 3, further comprising the steps of: determining whether a second message has been successfully sent to or received from the wireless telephone; upon determination that a second message has been sent or received from the wireless telephone, attempting a retry for the message without waiting the corresponding waiting period. This modification helps the mobile unit to access the resources quickly.

Regarding **claim 5**, Kuisma teaches the method of claim 1, wherein the first messaging switch is associated with text messages ("SMS", Paragraph [0005], line 1), and the second messaging switch is associated with multimedia messages ("MMSC", Paragraph [0002], line 23).

Regarding **claim 6**, Kuisma teaches the method of claim 5, wherein the first messaging switch includes an SMSC (Paragraph [0005], line 8) and the second messaging switch includes an MMSC (Paragraph [0002], line 23).

Regarding **claim 7**, the combinations of Kuisma, Cantwell, Skog teaches all the particulars of the claim 1. Kuisma did not teach specifically a method, wherein the wireless telephone is provided with a maximum number of retry attempts and further

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comprising the step of: modifying the maximum number of retry attempts. However, Cantwell teaches in an analogous art, the method wherein the wireless telephone is provided with a maximum number of retry attempts and further comprising the step of: modifying the maximum number of retry attempts (items 207,212 in Figure 2; parameters n, m can be set to any numbers). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method, wherein the wireless telephone is provided with a maximum number of retry attempts and further comprising the step of: modifying the maximum number of retry attempts. This modification makes the system more flexible.

Regarding **claim 8**, the combinations of Kuisma, Cantwell, Skog teaches all the particulars of the claim 1. Kuisma did not teach specifically a method further comprising the step of: modifying the length of one or more of the corresponding waiting periods. However, Cantwell teaches in an analogous art, the method, further comprising the step of: modifying the length of one or more of the corresponding waiting periods (item 300 in Figure 3). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method, further comprising the step of: modifying the length of one or more of the corresponding waiting periods so as to make the system flexible.

Regarding **claim 9**, Kuisma teaches a method for handling wireless messaging errors resulting from an attempted receipt of a message by a wireless telephone comprising the steps of:

receiving a message notification from a first messaging switch, the message notification being associated with a message at a second messaging switch (Paragraph [0005], lines 8-9);

initially attempting to retrieve the message from the second messaging switch (Paragraph [0002], lines 20-24).

Kuisma did not teach specifically a method wherein if an error message corresponding to an error condition is received from the second messaging switch, classifying the error condition as temporal or permanent; abandoning the message when the error condition is classified as permanent;

automatically performing a first retry attempt to retrieve the message when the error condition is temporal, the first retry attempt being performed after a first waiting period has elapsed after the classifying step;

automatically performing a second retry attempt to retrieve the message after the first retry attempt, the second retry attempt being performed after a second waiting period has elapsed after the first retry attempt; and

automatically performing a third retry attempt to retrieve the message after the second retry attempt, the third retry attempt being performed after a third waiting period has elapsed after the second retry attempt.

However, Cantwell teaches in an analogous art, the method wherein receiving an error message corresponding to an error condition is received from the second messaging switch, classifying the error condition as temporal or permanent and abandoning the message when the error condition is classified as permanent ("it might

be possible to shut down the remote unit after a prescribed number of times", Col. 3, lines 22-24);

automatically performing a first retry attempt to retrieve the message when the error condition is classified as temporal, the first retry attempt being performed after a first waiting period has elapsed after the classifying step (items 203-207 in Figure 1);

automatically performing a second retry attempt to retrieve the message after the first retry attempt, the second retry attempt being performed after a second waiting period has elapsed after the first retry attempt (items 208-212 in Figure 2); ; and

automatically performing a third retry attempt to retrieve the message after the second retry attempt, the third retry attempt being performed after a third waiting period has elapsed after the second retry attempt (items 213-214 in Figure 2).

Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method wherein, receiving an error message corresponding to an error condition is received from the second messaging switch, then classifying the error condition as temporal or permanent and abandoning the message when the error condition is classified as permanent;

automatically performing a first retry attempt to retrieve the message when the error condition is classified as temporal, the first retry attempt being performed after a first waiting period has elapsed after the classifying step;

automatically performing a second retry attempt to retrieve the message after the first retry attempt, the second retry attempt being performed after a second waiting period has elapsed after the first retry attempt; and

automatically performing a third retry attempt to retrieve the message after the second retry attempt, the third retry attempt being performed after a third waiting period has elapsed after the second retry attempt. This modification reduces the load on the base unit and thereby reduces the likelihood of a complete system failure.

Neither Kuisma nor Cantwell teaches error code corresponding to an error condition. However, Skog teaches in an analogous art error code corresponding to an error condition (Abstract). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use error code corresponding to an error condition in order to notify the user of the error.

Regarding **claim 10**, the combinations of Kuisma, Cantwell, Skog teaches all the particulars of the claim 1. Kuisma did not teach specifically the method wherein the third waiting period is longer than the second waiting period, and the second waiting period is longer than the first waiting period. However, Canton teaches in an analogous art, the method, wherein the third waiting period is longer than the second waiting period, and the second waiting period is longer than the first waiting period (Col. 4, lines 58-60). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method, wherein the third waiting period is longer than the second waiting period, and the second waiting period is longer than the first waiting period.

This reduces the likelihood of collisions with other remote units that are attempting to establish a connection.

Regarding **claim 11**, the combinations of Kuisma, Cantwell, Skog teaches all the particulars of the claim 1. Kuisma did not teach specifically a method wherein the third waiting period is 10 minutes, the second waiting period is three minutes, and the first waiting period is 30 seconds

Canton teaches first waiting period, second waiting period and third waiting period with increasing order of waiting period values from first to third. These are all system design choices that the network provider can make to optimize the control of these requests for network resources (Col. 6, lines 6-9).

Any suitable choice of parameter values of the waiting period (increasing order while going from first to third) can be chosen by the network provider to optimize the control of these requests for network resources. Therefore, one can conclude that Canton teaches the all the limitations of this particular claim 11.

Claim 12 is rejected for the reasons as set forth in claim 3.

Claim 13 is rejected for the reasons as set forth in claim 4.

Claim 14 is rejected for the reasons as set forth in claim 5.

Claim 15 is rejected for the reasons as set forth in claim 6.

Claim 16 is rejected for the reasons as set forth in claim 7.

Regarding **claims 24(25)** the combination of Kuisma and Cantwell teaches all the particulars of the claim except the method further comprising the steps of:
displaying the error condition when the error condition is classified as permanent.

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However, Skog teaches in an analogous art the method further comprising the steps of: displaying the error condition when the error condition is classified as permanent ("error message will be displayed", Paragraph [0027]). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method further comprising the steps of: displaying the error condition when the error condition is classified as permanent in order to improve the notification process.

Claims 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuisma et al (hereinafter Kuisma) (US 2002/0078228) in view of Cantwell et al. (hereinafter Cantwell) (US 6553237) and further in view of Skog et al. (hereinafter Skog) (US 2006/0236187) and further in view of Alvarez et al. (hereinafter Alvarez) (US 2006/0121889).

Regarding **claim 17**, the combination of Kuisma, Cantwell and Skog teaches all the particulars, except the method of claim further comprising the steps of: counting the number of retry attempts (items 207 and 212 in Figure 2; Cantwell); and when the current number of retry attempts exceeds a predetermined number, terminating the performance of retry attempts. However, Alvarez teaches in an analogous art the method of claim further comprising the steps of: counting the number of retry attempts; and when the current number of retry attempts exceeds a predetermined number, terminating the performance of retry attempts (Paragraph [0090], lines 9-12). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method of claim further comprising the steps of: counting the number of retry attempts; and when the current number of retry attempts exceeds a predetermined number,

terminating the performance of retry attempts. This modification helps the sender to decide on alternate methods or if the is a service provider then this modification helps in the billing process. These types of error handling are well known in the art.

Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuisma et al (hereinafter Kuisma) (US 2002/0078228) in view of Cantwell et al. (hereinafter Cantwell) (US 6553237) and further in view of Skog et al. (hereinafter Skog) (US 2006/0236187) and further in view of Crocker et al. (hereinafter Crocker) (US 2004/0198366.

Regarding claims 18, the combination of Kuisma, Cantwell and Skog teaches all the particulars of the claim except the method of claim wherein the maximum number of retry attempts is modified according to change in a monitored characteristics of the wireless network. However, Crocker teaches in an analogous art the method of claim wherein the maximum number of attempts is modified according to change in monitored characteristics of the wireless network (Paragraph [0031]) Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method claim wherein the maximum number of attempts is modified according to change in a monitored characteristics of the wireless network in order to provide a reliable communication.

Regarding **claims 19 (22)**, the combination of Kuisma, Cantwell and Skog teaches all the particulars of the claims except wherein the monitored characteristic is selected from the group consisting of load, capacity, and availability and success rate of

message transmission. However, Crocker further teaches the method of claim wherein the monitored characteristic is selected from the group consisting of load, capacity, and availability and success rate of message transmission (paragraph [0031, 0032, 0043]). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method of claim wherein the monitored characteristic is selected from the group consisting of load, capacity, and availability and success rate of message transmission in order to provide a reliable communication. This claim limitation is well known in the art as admitted by the applicant.

Regarding **claim 20**, the combination of Kuisma, Cantwell and Skog teaches all the particulars of the claim except the method wherein the maximum number of attempts is modified according to physical location of the wireless telephone. However, Crocker teaches in an analogous art the method of claim wherein the maximum number of attempts is modified according to physical location of the wireless telephone ("factor that may influence the choice of communication link including the type failure ...the location of the mobile vehicle", Paragraph [0031]; Paragraph [0038], lines 6-9). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method claim wherein the maximum number of attempts is modified according to physical location of the wireless telephone in order to provide a reliable communication.

Regarding **claim 21**, the combination of Kuisma, Cantwell and Skog teaches all the particulars of the claim except the method of claim wherein the length of one or more of the corresponding waiting periods is modified according to change in a

monitored characteristics of the wireless network. However, Crocker teaches in an analogous art the method of claim wherein the length of one or more of the corresponding waiting periods modified according to change in monitored characteristics of the wireless network (Paragraph [0031], "a reconnect attempt time period", Paragraph [0031], lines 20-23) Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method claim wherein the length of one or more of the corresponding waiting periods is modified according to change in a monitored characteristics of the wireless network in order to provide a reliable communication.


Regarding **claims 23**, the combination of Kuisma, Cantwell and Skog teaches all the particulars of the claim except the method of claim wherein the length of one or more of the corresponding waiting periods is modified according to physical location of the wireless telephone. However, Crocker teaches in an analogous art the method of claim wherein the length of one or more of the corresponding waiting periods is modified according to physical location of the wireless telephone ("factor that may influence the choice of communication link including the type failure ... the location of the mobile vehicle", Paragraph [0031], "a reconnect attempt time period", Paragraph [0031], lines 20-23). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method claim wherein the length of one or more of the corresponding waiting periods is modified according to physical location of the wireless telephone in order to provide a reliable communication.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Muthuswamy G. Manoharan whose telephone number is 571-272-5515. The examiner can normally be reached on 7:00AM-2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eng George can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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SUPERVISORY PATENT EXAMINER